Refutation Of Claim Of Mathematical Error in Sacred Qur'an

With Mathematical Solution

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An Algebraic Solution is provided

An answer to the Alleged Mathematical Error in Su:rah 4:11

Introduction:

It is sometime alleged that there is a Mathematical Error in Su:rah 4 Aya:t 11, 12 in regard to the inheritance .

The allegation is that when a male person dies leaving behind atleast one wife, one mother and one father and atleast three or more daughters, the Sum of these person shares Quran Prescribeth is greater than 1.   This is a mathematical error. Since the Sum of these these Shares as Prescribed by Sacred Qur'a:n cannot be greater than 1.

The shares according to Quran are:

1/8 (Share of 1 wife of joint share of all the wives), 1/6 mother, 1/6 father, 2/3(Joint Share of all the daughter3 or more than 3).

The Sum is:

(1/8)+(1/6)+(1/6)+(2/3)>1

Purpose of the paper is to discuss the mathematical solution in the above case if the Sum of the Shares is greater than one.

Discussion

The discussion begins with the two Verses of Su:rah 4.

Verse 11 of Su:rah 4

CONCERNING [the inheritance of] your children, God enjoins [this] upon you:8 The male shall have the equal of two females' share; but if there are more than two females, they shall have two-thirds of what [their parents] leave behind; and if there is only one, she shall have one-half thereof. And as for the parents [of the deceased], each of them shall have one-sixth of what he leaves behind, in the event of his having [left] a child; but if he has left no child and his parents are his [only] heirs, then his mother shall have one-third; and if he has brothers and sisters, then his mother shall have one-sixth after [the deduction of] any bequest he may have made, or any debt [he may have incurred]. As for your parents and your children - you know not which of them is more deserving of benefit from you: [therefore this] ordinance from God. Verily, God is all-knowing, wise.

ASAD

Allah chargeth you concerning (the provision for) your children: to the male the equivalent of the portion of two females, and if there be women more than two, then theirs is two-thirds of the inheritance, and if there be one (only) then the half. And to his parents a sixth of the inheritance, if he have a son; and if he have no son and his parents are his heirs, then to his mother appertaineth the third; and if he have brethren, then to his mother appertaineth the sixth, after any legacy he may have bequeathed, or debt (hath been paid). Your parents or your children: Ye know not which of them is nearer unto you in usefulness. It is an injunction from Allah. Lo! Allah is Knower, Wise.

PICKTHALL

Verse 12 of Su:rah 4

And you shall inherit one-half of what your wives leave behind, provided they have left no child; but if they have left a child, then you shall have one-quarter of what they leave behind, after [the deduction of] any bequest they may have made, or any debt [they may have incurred]. And your widows9 shall have one-quarter of

what you leave behind, provided you have left no child; but if you have left a child, then they shall have one-eighth of what you leave behind, after [the deduction of] any bequest you may have made, or any debt [you may have incurred]. And if a man or a woman has no heir in the direct line, but has a brother or a sister, then each of these two shall inherit one-sixth; but if there are more than two,10 then they shall share in one-third [of the inheritance], after [the deduction of] any bequest that may have been made, or any debt [that may have been incurred], neither of which having been intended to harm [the heirs].11 [This is] an injunction from God: and God is all-knowing, forbearing.

ASAD

And unto you belongeth a half of that which your wives leave, if they have no child; but if they have a child then unto you the fourth of that which they leave, after any legacy they may have bequeathed, or debt (they may have contracted, hath been paid). And unto them belongeth the fourth of that which ye leave if ye have no child, but if ye have a child then the eighth of that which ye leave, after any legacy ye may have bequeathed, or debt (ye may have contracted, hath been paid). And if a man or a woman have a distant heir (having left neither parent nor child), and he (or she) have a brother or a sister (only on the mother's side) then to each of them twain (the brother and the sister) the sixth, and if they be more than two, then they shall be sharers in the third, after any legacy that may have been bequeathed or debt (contracted) not injuring (the heirs by willing away more than a third of the heritage) hath been paid. A commandment from Allah. Allah is Knower, Indulgent.

PICKTHALL

Mathematical Problem

As the described ratios are

(1/8) for Wife or all Wives if the deceased male has no male issue but female isuues.

(1/6) for Mother of the deceased in the above mentioned condition(s).

(1/6) for Father of the deceased in the above mentioned condition(s).

(2/3) for all the Daughters of the deceased in the above mentioned condition(s).

It is Mathematically possible to divide a given amount or number if the sum of the ratios is greater than one. If a Mathematical Solution is possible then the solution exists.

So if a solution exists then the claim of Mathematical Error in the Divine Text is proven Mathematically wrong.

The Problem:-

Let "n" be a Real Number.Let Divide the number in four numbers say q,r,s,t such that they are into ratio of 4 terms a:b:c:d such that q+r+s+t = n

Where ,a,b,c,d ,q,r,s,t are all +ve Rational Number ,each greater than zero.

Solution As q,r,s,t are in ratio of a,b,c,d in the same order then

There exist α such that : q=αa,r=αb,s=αc and t=αd-----------eqs (1)

As given q+r+s+t=n -----------eq(2)

Substituting values from eqs(1) in eq (2)

(αa+αb+αc+αd)=n

¿ > α(a+b+c+d)=n

⇨ , α=n/(a+b+c+d)..................(3)
⇨ Now substituting the values in eqs (1) the values of q,r,s,t are found as
⇨ q = (a)(n/(a+b+c+d))   ---------(4)

 r = (b)(n/(a+b+c+d)).........(5)

▢   s = (a)(n/(a+b+c+d))---------(6)

▢   q = (t)(n/(a+b+c+d))----------(7)

▢   t = (t)(n/(a+b+c+d)----------(8)

Adding eqs 5,6,7,8 the equation (3) is satisfied.

 Now it is proved that a solution exist in all cases whether

  Sum (a,b,c,d)=1

  Sum (a,b,c,d)>1

0< Sum (a,b,c,d)<1

This question can be generalised to a μ divisions of a number η,where μ>4

As a solution exists without the condition Sum of the all the terms of a 4 terms ratio=1, the objection is proved to be based on a Mathematical Error itself.

Now for the special case take the following values:

  a=1/8 , b=1/6,c=1/6, and d=2/3 the solution becomes very easy.

Muslims are using this special solution almost from the beginning .

They call it Avl [Awl, Aul].

The problem to divide a given number in smaller numbers such that Sum of all the smaller numbers is equal to the number in a given 4-term Ratio, where it is not necessary that the sum of all the terms of the ratio=1 , is proved.

The Fallacy

The fallacy arises when it is assumed that to divide a number in four lesser numbers such that their sum is equal to the number and the sum of the terms of the ratios is greater than 1 is impossible.

Perhaps they have assumed that

If q:r:s:t =a:b:c:d then a+b+c+d = 1 otherwise it is impossible.

But there is no such condition.

It is a fallacy of assuming the special case as the only case and neglecting the general case, or declaring the general case as unmathematical when the general case or relatively general cases do exist.

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